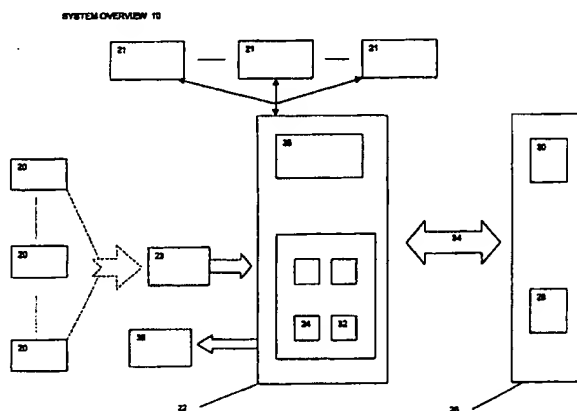


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**(54) Title: INTERNET-BASED MARKET HOSTING METHOD FOR ELECTRONIC PROXY CURRENCY (EPC) EXCHANGE**



(57) Abstract: An Internet-based market hosting method for an Electronic Proxy Currency (EPC) Exchange (10) is disclosed. The concept, methods and processes incorporated in the invention are to create a publicly available, interactive, on-line Exchange facility (22) for the trading of electronic proxy currencies such as frequent flyer miles, frequent guest or buyer points or other such similar articles commonly known as customer loyalty rewards. The program incorporates a mixed auctioning method that allows for any user (20) to assume the role of either bidder or seller at opportune and appropriate junctures in the auction process. An authorized user may access the Exchange (22) on-line and engage in desired transactions using a pre-determined process. The program automatically authenticates the user's identity and verifies the user's available electronic proxy currencies. The user (20) may then electronically initiate, modify, cancel, or conclude an exchange transaction. The program also creates, maintains and updates a custodial account for registered users and communicates updated transaction information to the EPC issuer (21).

## Internet-based Market Hosting Method for Electronic Proxy Currency (EPC) Exchange

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### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

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The present invention relates to an Internet-based Exchange facility for the trading of electronic proxy currencies. More particularly, the present embodiment of the invention relates to the implementation of an on-line, interactive program for the trading of electronic proxy currencies such as frequent flyer miles, frequent guest or buyer points, commonly known as customer loyalty rewards, coupons, vouchers, gift certificates, stamps, etc or other such similar articles.

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#### 2. Description of Related Art

A conventional forward or ascending auction process includes multiple buyers that bid on an item for sale offered by an individual seller usually starting with a preset minimum bid and at the end of the bid period the highest bid wins. Thus whether the bidding process is open (open outcry provides, at minimum, knowledge of the highest bid at all times) or closed (sealed bids) there is only one winner and a single transaction channel. This is loosely termed as a One (Seller)-to-Many (Buyers) single channel auction transaction.

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A typical reverse or descending auction process includes multiple sellers of the same commodity that either accept or decline an offer from a single buyer. In a blind bidding system each buyer makes offers separate from other buyers and thus is not privy to what other buyers may bid for the same item. The sellers compete with each other by lowering their price to fulfill the buyer's offer. Although the sellers are in competition with each other (and may have knowledge of the price at which other sellers accept an offer) in this system there may not be a successful conclusion to the transaction since the price acceptable to the buyer may not meet the sellers' minimum price threshold. This is loosely termed as a Many (Sellers)-to-One (Buyer) single channel auction transaction.

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A traditional Exchange method like a stock market has many buyers and many sellers and essentially buyers compete with buyers and sellers compete with sellers in a continuous

double auction. One of the factors however that influences the price for a particular company's equity shares is the fact that there is always a proscribed number of shares that are available to be bought or sold. Thus it is possible that demand may outpace supply if at a given time sellers of that stock are scarce and likewise supply may outstrip demand if buyers are non-existent. Given that there is essentially a finite supply pool (the shares) in comparison to a much larger (almost infinite) demand pool (cash) any appreciable imbalance between the demand and supply of shares usually has an acute effect on price.

By comparison electronic proxy currencies such as frequent flyer miles are constantly being "earned" (increasing supply) as well as redeemed (decreasing supply) daily in separate, varied and distinct transactions. Thus in the type of exchange contemplated by the present invention the demand and supply relationship is not so predictably linear. Moreover the supply pool of a particular proxy currency, until liquidated, is also simultaneously part and parcel of the pool that can generate demand for other proxy currencies.

The method and processes described herein incorporate aspects of each of the above but is not exclusively either one or the other. It is distinguished by some fundamental differences. This auction and exchange mechanism allows for a user to assume the role of either a bidder or seller at opportune junctures in the auction process. It is a Many (Sellers) -to-Many (Buyers) open bidding multi-channel auction transaction and intrinsically it is also a concurrent multi-channel forward and reverse auction process.

## SUMMARY OF THE INVENTION

The present invention provides an Internet-based market hosting method for an Electronic Proxy Currency (EPC) Exchange. The concept, methods and processes incorporated in the invention are to create a publicly available, interactive, on-line Exchange facility for the trading of electronic proxy currencies such as frequent flyer miles, frequent guest or buyer points or other such similar articles commonly known as customer loyalty rewards. The program incorporates a mixed auctioning method that allows for any user to assume the role of either bidder or seller at opportune and appropriate junctures in the auction process.

An authorized user may access the Exchange on-line and engage in desired transactions using a pre-determined process. The program automatically authenticates the user's identity and verifies the user's available electronic proxy currencies. The user may then

electronically initiate, modify, cancel, or conclude an exchange transaction. The program also creates, maintains and updates a custodial account for registered users and communicates updated transaction information to the EPC issuer.

5 In view of the above, the present invention is advantageous in that it provides an on-line, interactive program for the trading of electronic proxy currencies.

The disclosed invention applies market hosting methods in a new context, and assembles the processes in a new, useful and non-obvious way. The elemental concepts and  
10 methods are disclosed in the embodiments.

The disclosed invention is also advantageous in that it permits consumers or businesses to maximize the utility value of their proxy currencies.

15 In parallel the present invention is further advantageous in that it provides proxy currency issuers a method to enhance the intrinsic and perceived value of their awards programs and potentially increase program revenues and or reduce marketing costs.

20 Yet another advantage of the present invention is that it provides a method and platform to generate advertising and or sponsorship income.

The above and other advantages are provided by the disclosed invention that includes provision for access over the Internet and on-line registration of users.

25 Yet another advantage of the present invention is that it provides a user the ability to view a listing of proxy currency issuers, view the EPC available in the user's custodial account, conduct a proxy currency exchange transaction, check the status of pending transactions and view other ancillary information.

### 30 BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and advantages of the present invention will become apparent from the following description of the preferred embodiment with reference to the drawings:

35 FIG. 1 is an overview of the system of the present invention.

FIG. 2 is a flow chart showing the access part of the program of the preferred embodiment of the present invention;

FIG. 3 is a flow chart showing the user registration part of the program of the preferred embodiment of the present invention;

5 FIG. 4 is a flow chart showing the electronic proxy currency exchange transaction part of the program of the preferred embodiment of the present invention;

FIG. 5 is an illustration of the Main Board listing of the preferred embodiment of the present invention.

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FIG. 6. is an illustration of a Merchant Panel of the preferred embodiment of the present invention.

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FIG. 7 is an illustration of a Queue page of the preferred embodiment of the present invention.

FIG 8. is a graphical illustration of the user transaction execution part of the preferred embodiment of the present invention.

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## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGURE 1 is a depiction of a system, generally indicated by the numeral 10, for accumulating electronic proxy currency data which may be stored in a database. The SYSTEM 10 also includes means for facilitating exchanges of electronic proxy currencies in accordance with the method of the invention as will be explained in more detail later. In the particular architecture shown, several USER TERMINALS 20, which may be personal computers, PADs, kiosks, or other means capable of connecting to and exchanging data on the Internet, are used to generate an electronic currency profile for a particular user or client. Electronic proxy currency (EPC) ISSUERS 21 which may be merchants, service providers, or other commercial entities may be connected to a CENTRAL COMPUTER 22 via the Internet, LAN, VPN, etc. Alternatively physical media may be used to exchange merchant data with the central computer. User information gathered by the TERMINALS 20 is transmitted to the CENTRAL COMPUTER 22 via an appropriate INTERFACE MEANS 23. The CENTRAL COMPUTER 22 is operated by an Exchange, which may be a collection of merchants or a completely independent commercial entity which is in charge of overseeing the exchanges of EPC in accordance with the method of the present invention. The CENTRAL COMPUTER 22 contains a DATABASE 24 for storing the data items, as well as interface means for interfacing with a SERVER COMPUTER 26, which may be a mainframe computer such as a Unix or OS/2 server. A SOFTWARE KERNEL 28 stored in the SERVER COMPUTER 26 contains code for manipulating and processing electronic proxy currency data in accordance with the methods of the present invention which may be executed by a processor within the SERVER COMPUTER 26. Of course, the code may also be stored on a portable medium such as magnetic tape or disc. It is to be understood that architectures other than the one shown may be used. Through appropriate data ACCESS CONTROL 30 and other program utilities, the KERNEL 28 accesses one or more DATABASES 32 which contain data concerning the transactions from which valid exchanges of proxy currencies among users are to be facilitated. Once the transactions are verified they may be sent to the Exchange COMPUTER 22 via I/O MODULE 34.

The Exchange COMPUTER 22 contains an electronic proxy currency INTERFACE 36 which functions as an input mechanism for certain variables such as valuation of electronic proxy currency, expiration dates of the electronic proxy currency, etc. The client COMPUTER 22 also includes an OUTPUT DEVICE 38 such as a CRT, printer, or floppy disk.

The method of the present invention is implemented by a computer program which will be described with reference to FIGS. 2 - 8.

5 FIG. 2 is a flow chart showing the access part of the program. Upon gaining access to the Internet 40, via a commercial or residential ISP, a user may proceed to the HOMEPAGE 50 of the Exchange at its designated URL or IP address. (It being understood by those skilled in the art that HOMEPAGE 50 is the main Internet address for the Exchange program). In FIG. 2, USER A, B, C indicates different user classification for access and  
10 authorization since restrictions may be imposed for accessibility to various levels of activity (further defined in Figure 3).

Upon viewing the HOMEPAGE 50 the user is provided with a SELECTION MENU 100 that supplies several options. Depending on the user's choice from the SELECTION MENU  
15 100 the program may proceed to the online REGISTRATION FORM 110 that allows any PUBLIC ACCESS USER C to sign up on-line to become a registered USER A, B..

Alternatively if the user is already registered the user may choose to go directly to view the MAIN BOARD 400 listing of Merchant members or electronic proxy currency issuers. The  
20 user may also select to view the Exchange INSTRUCTIONS 430 and guidelines governing user trading activity or browse through various FAQ 440 (Frequently Asked Questions) listings generated in response to questions submitted by users of the Exchange. The standard USER AGREEMENT 450 is also provided that describes the legal terms and conditions governing access to or use of the Exchange and any other statutory  
25 requirements or legal disclaimers that may apply. Optionally provision may also be made for automatic LINKS 460 to other Internet websites or homepages for relevant information.

It should be noted that in the preferred embodiment of the disclosed invention the user is able to return to SELECTION MENU 100 from any part of the program. This being stated  
30 generally, it will be appreciated that this feature is applicable to the further program steps of the preferred embodiment described below and therefore will not be repeated in the following description.

In FIG. 2 if the user's choice from the SELECTION MENU 100 is to proceed to the online  
35 REGISTRATION FORM 110 the program continues to the procedure depicted in FIG. 3

In the preferred embodiment as shown in FIG. 3, an on-line REGISTRATION FORM 110 is presented to the user. At step 115 the program checks for completeness the user's

response to a pre-determined inquiry set. If the application form is not completed fully then the user is restricted to a pre-determined level of access to the Exchange that allows for browsing and viewing as a PUBLIC ACCESS USER C.

5 In the preferred embodiment, the user may complete the application and is also provided the option to include authorization for an ELECTRONIC PAYMENT 120 for any transaction or registration fees that may be incurred by the user. The method of electronic payment could be for example by credit or debit card or similar process. If such option is selected by the user the program proceeds to step 130, whereupon a communication link is  
10 established and the program verifies the user's identity, credit card information, availability of funds etc., it being appreciated by those skilled in the art that there exists standard commercial procedures to execute such verification and authentication procedures.

If step 130 is successful the program proceeds to CREATE LEVEL 1 ACCESS ACCOUNT  
15 140 based on the registration information supplied by the user in step 115. Memberships in rewards programs for example are also verified using a pre-determined routine. If the preceding steps are completed successfully the program assigns a unique ID number to the user and enrolls the user as a bona fide member in the Exchange's USER 1 REGISTRATION DATABASE 700. This provides the registrant with top level access to  
20 and use of the Exchange.

If the user decides not to immediately authorize electronic payment at step 120, or step 130 is not successful the program proceeds to CREATE LEVEL 2 ACCESS ACCOUNT  
25 150 based on the registration information supplied by the user in step 115. Memberships in rewards programs are similarly verified using a pre-determined routine. The program enrolls the user as a bona fide member in the USER 2 REGISTRATION DATABASE 800. This provides the registrant with restricted access to and use of a set of pre-determined Exchange features which is greater than a public access user but less than Level 1 account privileges.

30 In FIG. 2 if the user's choice from the SELECTION MENU 100 is to proceed to activate the MAIN BOARD 400 selection the program continues to the procedure to DISPLAY MAIN BOARD 410 as indicated in FIG. 4. The Main Board shows a list of Merchant members and EPC issuers of the Exchange in a pre-determined graphical or textual  
35 format. It being appreciated by those skilled in the art that such list may be shown as an arrangement of icons, logos or other interactive (hypertext) format using appropriate computer languages. An example of a listing is shown below in FIGURE 5.



In the preferred embodiment as shown in FIG. 4 the user may proceed to the next step using a computer mouse and click on the desired Merchant member logo or name for viewing of that Merchant Panel (described below). This is depicted in FIG. 4 as step 420 SELECT MERCHANT PANEL.

In Figure 4, DISPLAY MERCHANT PANEL 500, is depicted as multiple pages indicating that if a large amount of information needs to be included the display may actually comprise several pages and the user will be provided with a scroll option so as to be able to scroll over the information pages.

An example Merchant Panel is shown in Figure 6. The accompanying definitions of the key features are described below.

A particular Merchant Panel displays in a pre-determined manner a view of the trading activity associated with the selected Merchant program. This provides a user who wishes to conduct a transaction for miles or points ("milpts") or other form of electronic proxy currency issued by the particular Merchant, the ability to view the current status of associated trading activity. The Merchant Panel lists and updates the top bids made by registered users for a discrete quantity of that Merchant's proxy currency. The bids are expressed in terms of the other proxy currencies available on the Exchange.

In the example illustrated in Figure 6 the discrete quantities are represented by "Blocks" of milpts across the top row of the panel. In this instance the figure depicts the ABC Merchant Panel with several top bids, for example, indicating a user (or users) has bid 28K (28,000) milpts issued by XYZ Merchant in exchange for 25k (25,000) milpts issued by ABC Merchant. Other top bids made by registered users are also shown using milpts issued by Merchants HAL, STU, etc. The present invention shows the preferred embodiment but it will be appreciated by those skilled in the art that other arrangements are possible.

#### MERCHANT PANEL DEFINITIONS:

**BLOCK** - This represents a discrete quantity of milpts denoted as  $xK$ , where  $K$  equals thousand. The example in Figure 6 depicts blocks between 1K and 1000K. This may be extended to the desired value in any desired interval steps.

**SOURCE** - These are the call letters used to identify a particular Merchant member or EPC issuer.

5     **QS SQUARE** - A square under a Block heading represents the Quantity and Source information- Quantity denoted in milpts or other units, in thousands, and Source described by call letters.

10     **STATUS INDICATORS** - The QS squares under each column heading can be symbol and or background color- coded for informational purposes. For example:

       Status Code 1 - Indicates that no Bids have been made for that block for more than a pre-determined number of hours

15         Status Code 2 - Indicates the current top bid in quantity and source of milpts. May also indicate that bid offers are still open and that the underlying Queue (*see definition below*) is active

*Optional status indicators*

20         Status Code 3 - Indicates the quantity and source of milpts at which the last trade was closed for that particular block and that no bids are pending. May also indicate that a pre-determined number of hours have not elapsed since that trade.

25         Status Code 4 - Indicates that the last bid was either canceled or time expired and a pre-determined number of hours has not elapsed since the cancellation or expiration.

30     Each QS Square is representative of and linked to an underlying page, defined as a "Queue" that lists the top pre-designated number of bids in descending order according to the value of each bid. Each Queue by definition is associated with a pair of Merchant members or EPC issuers.

35     An example Queue is illustrated in FIGURE 7. The accompanying item definitions are described below.

The Number of Bids column indicates the number of users that have placed bids of the same value as shown in the Amount column. Bids of equal value are additionally queued according to the date and time that the bids were submitted (*not shown*). If applicable the bids are also sorted according to any associated validity expiration date (DEC). By definition a Queue Page listing is dynamic, reflecting user trade activity involving a pair of Merchant members or EPC issuers.

#### QUEUE DEFINITIONS

The Date Expiration Codes (DEC) are designators that indicate the date, if any, by which the utility value of the commodity would expire, for example,

Code 1 or color: None (default)

Code 2 or color: pre-determined number of days from current date

Code 3 or color: second pre-determined number of days from current date

The HI, LO, LAST, BENCH, definitions are valid for a specific 24 hour period

HI - represents the highest bid at which a trade was closed

LO - represents the lowest bid at which a trade was closed

LAST - represents the last bid at which a trade was closed

BENCH - represents the latest benchmark trade value. (*described later*)

The information in the Queue is updated continuously as values in the Queue are changed as a result of trade activity. The user will see these changes as often as they refresh their computer screen. Depending on the value of a bid made by a user it may be placed in the QUEUE if it is among the top pre-designated number of bids. If it is not then it is placed in the category designated "POOL". The bids contained in the POOL will be similarly ranked according to bid size and time and date order. As values of the top bids vary, bids from the pool will be placed in the Queue and vice-versa.

With reference to FIG 4., a user would proceed from viewing a Merchant Panel to SELECT OR CREATE QUEUE 510 whereupon the program would then proceed to DISPLAY QUEUE 600

and simultaneously provide a user the options depicted by SELECTION MENU 520.

SELECTION MENU 520 indicates options available that allow a user to initiate, cancel, modify or close a transaction for, in the above example, a desired Block of milpts.

If a QS square is blank on a particular Merchant Panel indicating that no bids have been made for more than a pre-designated number of hours prior to the current time, the user can initiate the CREATE QUEUE 510 process and place their bid by clicking on a 'Start New Queue' icon located on the Merchant Panel. (Figure 6)

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The preferred embodiment of the invention also provides a material feature wherein the user may employ a reverse approach to the process and instead commence the transaction by the acceptance of a bid offered on a Queue Page. In the above example, a XYZ bidder has the option to review the XYZ Merchant Panel and evaluate offers made by ABC bidders on a XYZ- ABC Queue, as opposed to placing a bid on an ABC-XYZ Queue as illustrated in Figure 7. All Queues are accessed via the desired Merchant Panel, the user simply identifies and clicks on the QS square under the desired Block.

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While viewing a desired Queue page the means for a user to INITIATE BID 610, ACCEPT BID 620, INCREASE BID 630, CANCEL BID 640, and EXTEND (time) BID 650 is provided as depicted in FIG 4. In order to execute any of the above options the user is prompted to ENTER REQUIRED INFORMATION 660 as described in further detail below.

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A new bid is placed on a Queue by using a "Submit New Bid" button or similar menu selection. The preferred embodiment of the invention requires a minimum of user information to be submitted: (a) the bid amount and (b) the associated expiration date code, if any. An alternate embodiment in addition requires (c) a Queue number and (d) selection of an alternative acceptable expiration date code for any milpts received in exchange if the default choice is unavailable.

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25

A bid offer is accepted and closed with any bid listed on a Queue, by using an "Accept Bid" button or similar menu selection. The preferred embodiment of the present invention similarly requires a minimum of user information to be supplied: (a) a Queue number, (b) the Bid amount and (c) the associated expiration date code, if any. An alternate embodiment in addition requires (d) the date expiration code associated with the Accept offer and (e) selection of an alternative acceptable expiration date code for any milpts received in exchange if the default choice is unavailable.

30

A new bid is initiated via a selected Merchant Panel when a QS square is blank or non-existent by using a "Start New Queue" icon on a Merchant Panel (Figure 6). This action initiates the creation of a new Queue where the user's Bid will be listed. Subsequent bidders are added to this Queue. The preferred embodiment of the present invention requires a minimum of user information to be submitted: (a) the bid amount and (b) the

35

Source of milpts or EPC, (c) the associated expiration date code, if any and (d) the selected block on the Merchant Panel. An alternative embodiment in addition requires (e) selection of an alternative acceptable expiration date code for any milpts received in exchange if the default choice is unavailable.

5

The value of an existing bid previously made by a user that is listed on a Queue, is increased by using an "Increase Bid Value" button or similar menu selection. The preferred embodiment of the present invention requires a minimum of user information to be submitted: (a) the increased bid amount and (b) and the expiration date code, if any.

10

An existing bid previously made that is listed on a Queue is canceled by using the "Cancel Bid" button or similar menu selection. The preferred embodiment of the present invention does not require the user to provide any additional information since all the data necessary to execute a cancellation is pre-existing and is linked to the user identification code stored in USER 1 REGISTRATION DATABASE 700.

15

Similarly the period of validity of an existing bid listed on a Queue is extended by using an "Extend Bid Period" button or similar menu selection. The preferred embodiment of the present invention procedures does not require the user to provide any additional information.

20

In the preferred embodiment of the present invention each Queue is displayed on an individual page and each of these pages is designed and programmed to provide space for electronic advertising messages, thus providing an opportunity to generate advertising revenues. The Merchant Panels are similarly designed. It will be appreciated by those skilled in the art that it is also possible in alternative embodiments to display multiple Queues in pre-configured formats on a single page.

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In FIG 4., TRANSACTION PROCESSING AND VERIFICATION 670 depicts the part of the program where all transactions initiated by a plurality of users are individually and collectively examined, logged, sorted, processed, verified and reconciled using pre-determined routines. It being understood by those skilled in the art that this can be achieved using a variety of data processing methods.

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If the user's desired transaction is completed successfully as indicated at step 680, the program proceeds to update the appropriate databases, such as USER ACCOUNT DATABASE 710, MERCHANT OR EXTERNAL DATABASE 720 and any OPTIONAL DATABASE 730 as necessary. If the transactions are not completed then the user may

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EXIT 690 the program or return to the options depicted by the SELECTION MENU 520. The transaction execution flow is illustrated in FIGURE 8.

5 In the preferred embodiment of the present invention TRANSACTION PROCESSING AND VERIFICATION 670 may be implemented to also include additional processes or features, it being understood by those skilled in the art that this can be achieved using a variety of methods and other data processing arrangements.

10 For example, a means such that a user receives an electronic notification in response to a transaction initiation, or confirmation or other advisory in response to the execution of a transaction request.

15 A means to implement systems and procedures that employ state-of-the-art security and encryption methods for all data transmissions or communications.

A means to assemble, archive and analyze an aggregate account of records of historic transaction activity of the users of an Exchange.

20 A means to uniquely identify and register a person or legal entity as a bona fide and authenticated agent able to conduct transactions on behalf of a registered user.

At this juncture a particular feature of the program of the present invention will be described.

25 Benchmark values as depicted on the MAIN BOARD 410 listing (Figure 5) is a convenience feature provided, for comparison purposes, as a reference point to assist users in making "utility" evaluations or determining "comparable value" between electronic proxy currencies. A Benchmark for example may reference and represent the minimum number of miles for domestic round-trip travel in a particular fare class required by the  
30 associated frequent flyer program. This benchmark could then be compared to other EPC benchmarks and provide an indication of comparable value. Some comparable value determinations are easily calculable, however the calculation can become increasingly complex depending on the type and number of variables used in the determination.

35 Benchmarks may be maintained for example in OPTIONAL DATABASE 730 and updated and modified as necessary. However as noted this is a convenience feature solely for relative valuation, the open market mechanism of the Exchange would ultimately

determine the premium above or discount below a Benchmark to conduct a transaction, contingent on upon users' utility value or other estimation.

5 The preferred embodiment of the present invention incorporates a methodology to calculate such benchmarks and is incorporated herein by reference. It will be appreciated by those skilled in the art that there are a number of mathematical and logical procedures possible to accomplish such determinations

10 For example Benchmarks for a frequent buyer program could be incorporated based on either *pre-determined* or *implied* or *negotiated* valuations.

15 *Pre-determined* valuations are those that may have been previously arranged and pre-existing between specific Merchant members or EPC issuers prior to membership in an Exchange.

A *Negotiated* valuation is one that is determined based on pricing or economic analyses relative to a particular Merchant program or EPC issuer.

20 An *Implied* valuation is one that is derived from calculations based on known comparable valuations between three or more EPC, i.e. if X relative to Y and X relative to Z is known then Y relative to Z may be derived.

25 A related feature of the preferred embodiment of the present invention is displaying for users a special index listing of a specified group of Merchant members or EPC issuers and providing a specified EPC unit equivalent to and representative of a combined and amalgamated EPC unit of the specified group. These EPC units would be valid for goods or service purchases from a specified group of merchant members including those in the special index listing.

30 Users are provided the opportunity on scheduled occasions to participate in an auction process, conducted under pre-determined criteria, within specified time intervals, to acquire a limited number of such specified units by submitting a bid using their available and eligible proxy currencies.

35 Since numerous modifications and variations will readily occur to those skilled in the art, it is not desired that the present invention be limited to the exact construction and operation illustrated and described herein, and accordingly all suitable modifications and equivalents

which may be resorted to are intended to fall within the true spirit and scope of the claimed invention.

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**CLAIMS**

1. A system for provision of an electronic proxy currency Exchange among and between a plurality of users and merchants, including a computer system accessible for on-line interactive communication with said users, said system comprising:
- 5 a first memory area for storing a list of merchants or commercial legal entities, said merchants being sponsors or providers of loyalty rewards programs or issuers of electronic proxy currencies;
- 10 a second memory area for storing Merchant Panels, said Merchant Panels including a display of electronic proxy currencies in a pre-determined format;
- 15 a third memory area for storing Queue pages, said Queue pages describing a pair of electronic proxy currencies in a pre-determined format;
- 20 a fourth memory area containing a database for storing user registration and account information for each of said users of said Exchange, said information including enrollment status of the users; and,
- 25 processing means for facilitating exchanges of electronic proxy currencies between and among said users and said merchants.
2. A method of facilitating exchanges of electronic proxy currency between and among a group of users and a group of electronic proxy currency issuers comprising the steps of:
- 30 displaying a homepage including Merchant Panels and Queue pages, said homepage stored in an Exchange computer,
- 35 providing said users with an on-line registration form for user membership application, said registration form being susceptible to electronic entries and;
- providing said users with an on-line form for authorizing electronic payment methods, said form being susceptible to electronic entries.
- providing said users with an on-line transmittal form, said transmittal form being susceptible to said electronic entries and including at least data fields to allow for said

users to initiate, modify, cancel or conclude an electronic proxy currency exchange transaction.

3. The method of claim 2, wherein said computer is further programmed to receive said electronic entries and to perform the steps comprising:

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establishing an on-line link to a pre-designated computer and sending said electronic entries to said pre-designated computer via said on-line link to authenticate user identify and verify available credit;

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establishing an on-line link to a pre-designated computer and sending said electronic entries to said pre-designated computer via said on-line link to verify user membership in rewards programs or ownership of electronic proxy currencies.

4. The method of claim 2, wherein said computer is further programmed to perform the steps comprising:

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receiving entries corresponding to said registration form and establishing a user account in a user registration database for said user

5. The system of claim 1, wherein said memory area for storing user information for each registered user comprises a plurality of data fields each for indicating an enrollment level of one of said registered users.

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6. The system of claim 1, wherein said account information for each registered user comprises a plurality of registers each for indicating the available electronic proxy currencies of one of said registered users

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7. The system of claim 5, wherein said user information includes authorization privileges to use said Exchange and wherein access to said Exchange is restricted to users qualified at said pre-defined enrollment levels.

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8. The method of claim 2, wherein said computer is further programmed to perform the steps comprising:

receiving an electronic request to view said Merchant Panels;

displaying said Merchant Panels as requested by user.

5        9. The method of claim 2, wherein said computer is further programmed to perform the steps comprising:  
receiving an electronic request to view said Queue Pages;  
displaying said Queue pages as requested by user;  
receiving said transmittal form of said users; and,  
10       receiving EPC bid offerings from said user for placement in said Queue.

10. The method of claim 3, wherein said computer is further programmed to perform the steps of:

15       receiving said electronic entries from a user and electronically interrogating EPC issuer external databases and verifying said user membership in rewards programs and ownership of said electronic proxy currency.

20       11. The method of claim 9, wherein said computer is further programmed to receive said electronic entries and to perform the steps comprising:

processing said transmittal form of said users, including at least data fields indicating said users request to initiate, modify, cancel or conclude an EPC exchange transaction;

25       processing said EPC bid offerings by said user and determining the placement of said bid on said Queue page according to a predefined formula using said bid as a parameter in said pre-determined formula.

30       12. A method for providing an on-line Electronic Proxy Currency (EPC) exchange program comprising the steps of:

providing an Exchange defined as a publicly available worldwide, interactive, electronic Internet-based trading facility for customer loyalty rewards or other such similar electronic  
35       proxy currencies;

assembling a group of commercial legal entities identified as issuers of said electronic proxy currencies or providers and sponsors of said loyalty rewards programs for inclusion as Merchant members of an Exchange based upon pre-determined criteria;

5 registering a group of users identified as valid members of said loyalty rewards programs or legal owners of said electronic proxy currencies for inclusion as trading participants of said Exchange based upon pre-determined criteria;

10 establishing and maintaining both centralized and dispersed computer databases for the categorizing and storing of said electronic proxy currencies owned by a plurality of said participating users issued by at least two of said commercial legal entities in accounts corresponding to said registered users;

15 providing interactive computerized methods for multiple and simultaneous exchange transactions of said electronic proxy currencies among and between said users in accordance with pre-determined interchange criteria.

20 13. The method of claim 12 further including the step of providing a means for said users to transfer to or from said user's account, all or a portion of said EPC to or from an external program database maintained or operated by a particular member of said group of commercial legal entities.

25 14. The method of claim 12 further including the step of establishing a list of relative values among EPC and providing a means to view such information for said EPC in accordance with specific computation and valuation methodologies.

15. The method of claim 12, further comprising the steps of;

30 providing an on-line registration form for said users including, a field for authorization of an electronic payment method;

allowing said user to electronically transmit said registration form; and,

35 establishing an on-line link to a pre-designated computer and verifying said user identification and availability of funds for said user.

FIGURE 1. SYSTEM OVERVIEW 10.

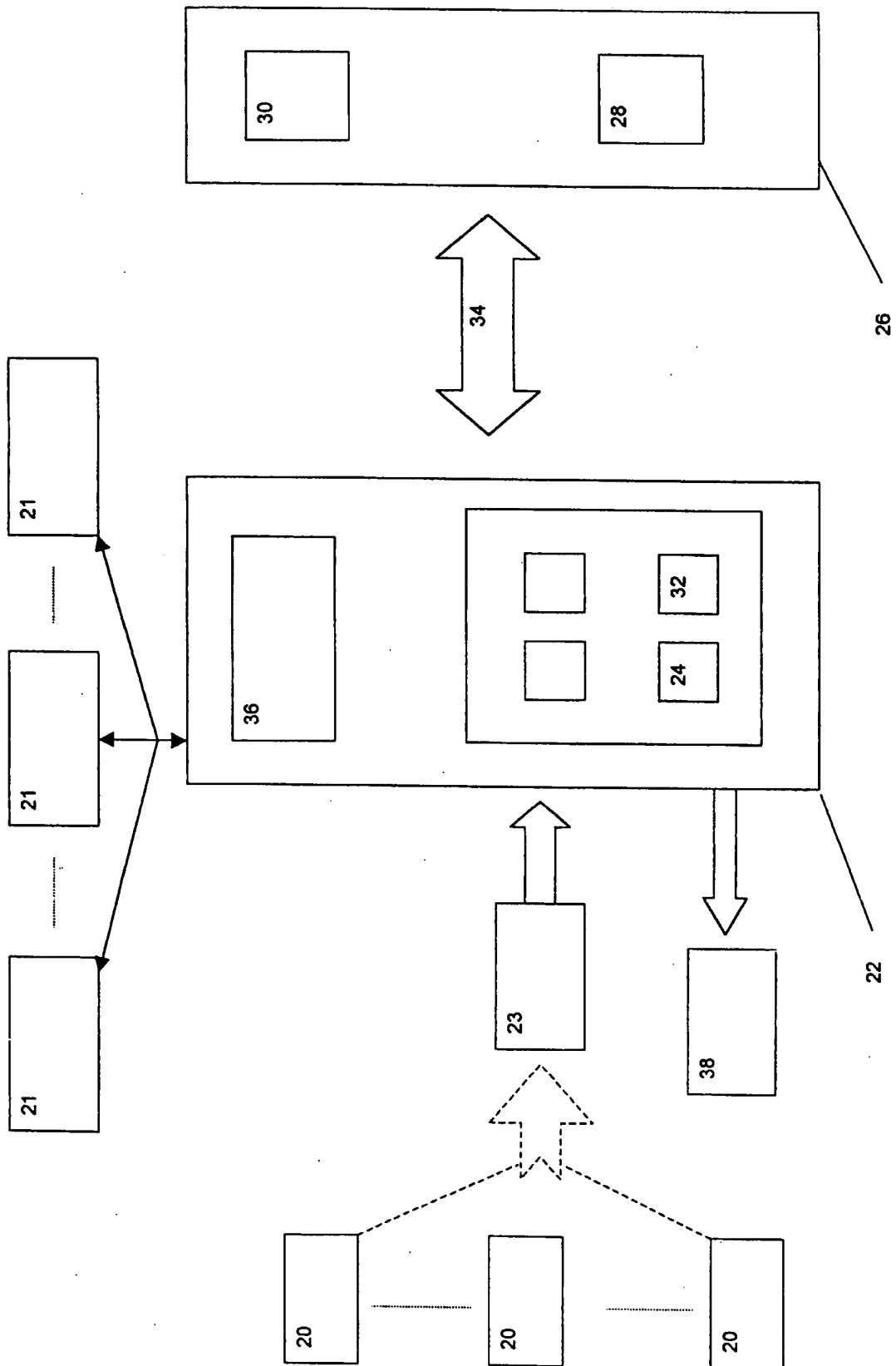


FIGURE 2

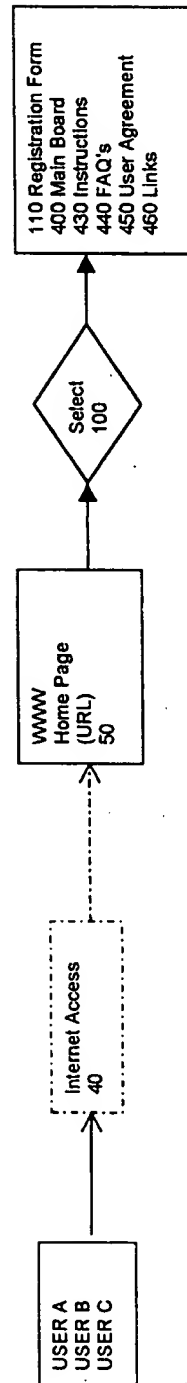


FIGURE 3

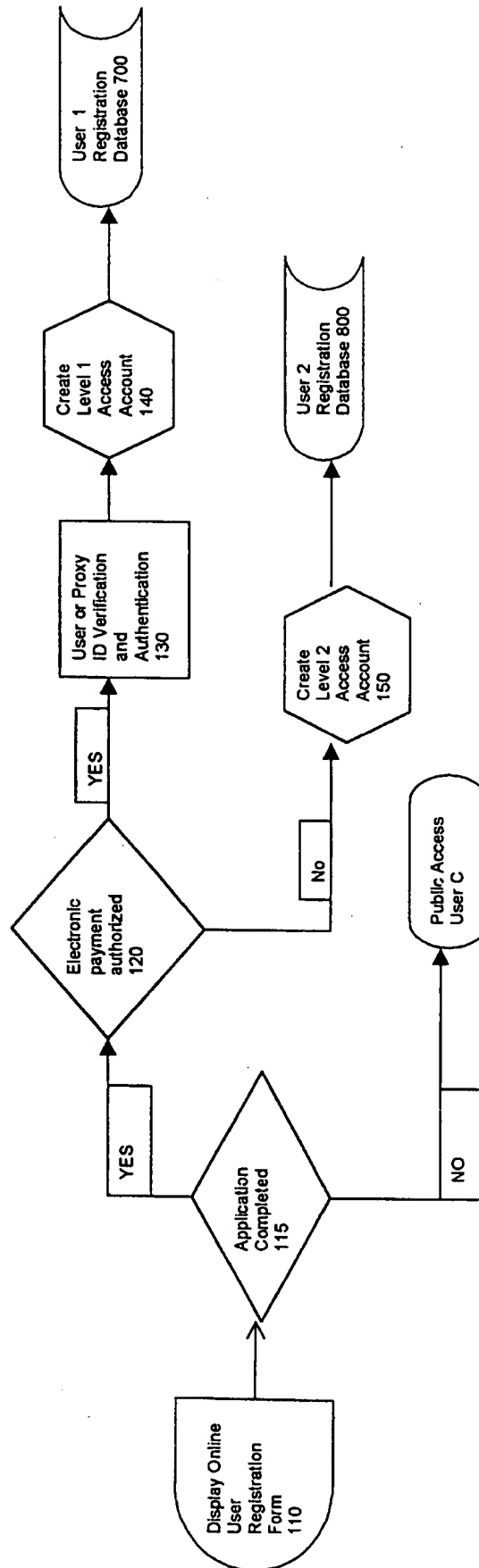


FIGURE 4

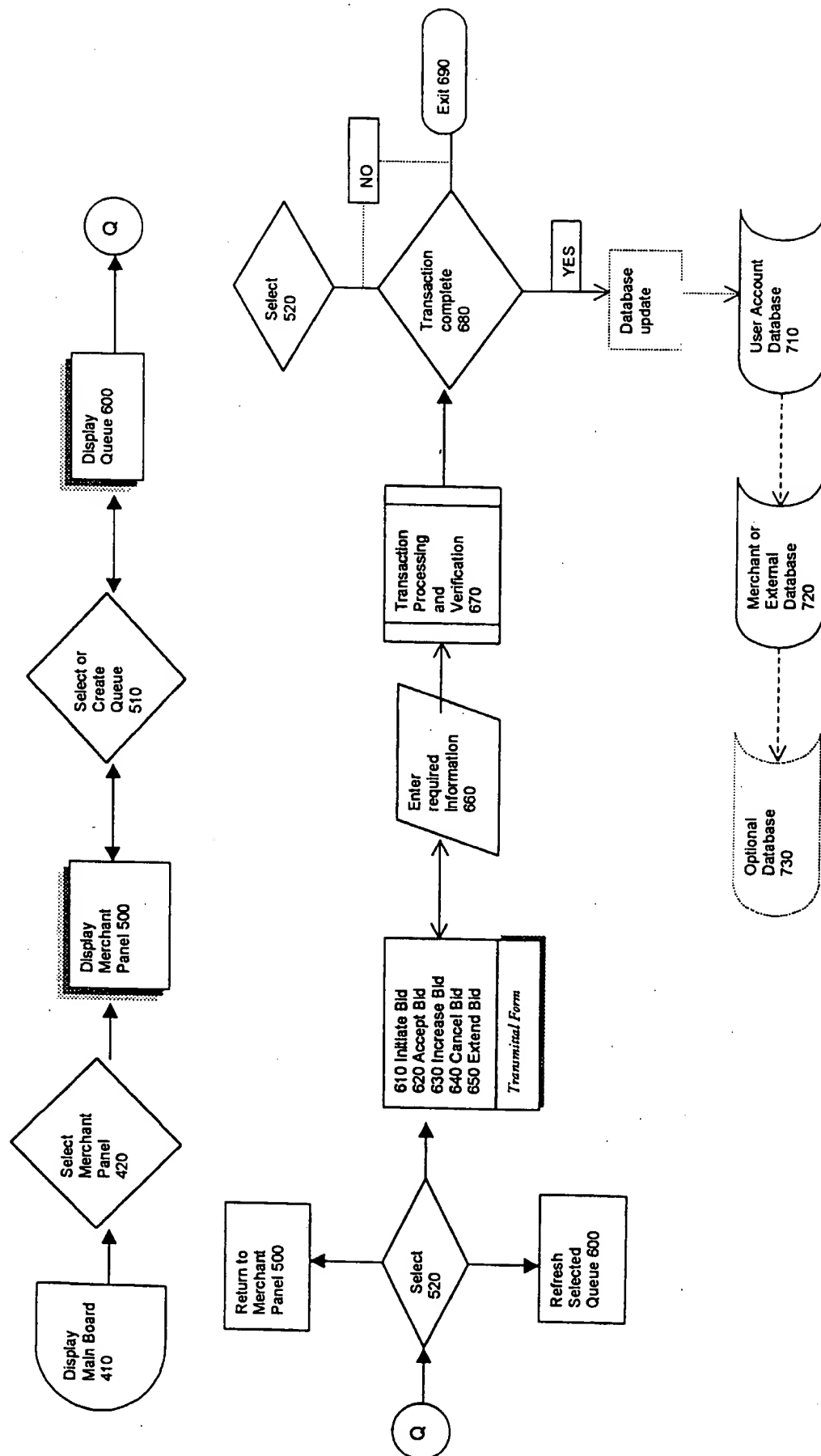




FIGURE 5.

**Main Board Listing**

EPC Issuer	Logo	Name of Program	Benchmarks (milpts)
ABC		ABC Program	xK/ yK
XYZ		XYZ Pluz	wK / mK
HAL		HAL Systems	n K/ pK

milpts = miles or points

FIGURE 6.

**{ABC Merchant Panel}**

Blocks (Milpts)	1K	2K	3K.	..10K	15K	20K	25K	30K	..100K	200K	1Mk
XYZ				10.5K			28 K				
HAL						X	27.4 K				
STU				13K			26.5 K				
WAX							29.9K				
WAY		X		12K			28.3K				
START NEW QUEUE											

FIGURE 7.

**ABC- XYZ Queue page**

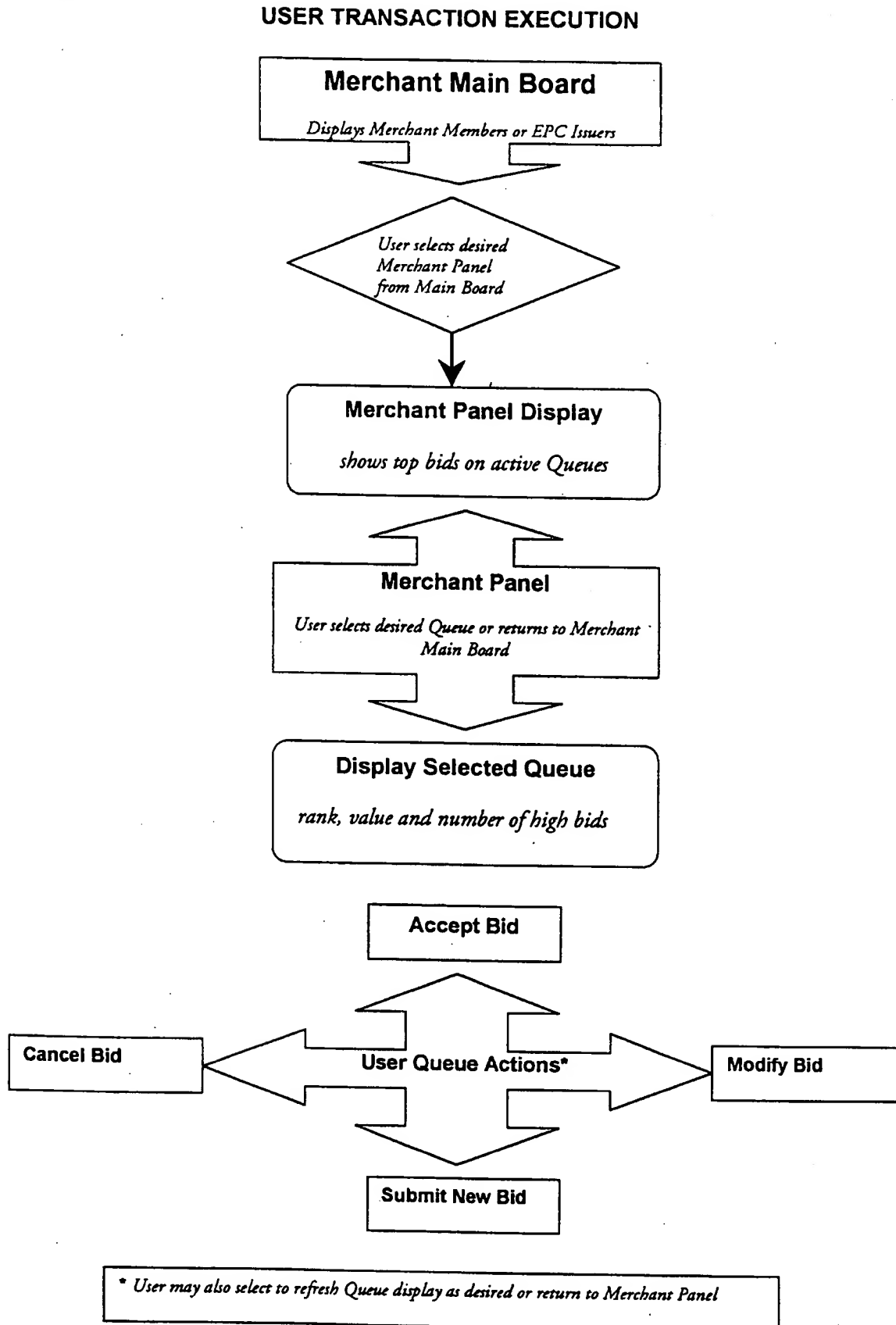
Bench: 25K Last: 27.6K

Hi:30K

Low: 26K

Rank	Amount	Number of Bids	DEC 1	DEC 2	DEC 3
1	28K	1	1		
2	27.9K	6	5		1
3	27.8	18	13	5	
4	27.5	5	5		
5	27K	10	7		3
6	26.7	9	6	2	1
7	26.6	12	10		2
8	26.5	15	15		
9	26.3	7	7		
10	26	1	1		
POOL		130	128		2

Figure 8



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/26279

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60; G06K 5/00; A63F 9/24

US CL : 705/5,37; 235/380; 463/17

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/5,37; 235/380; 463/17

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,058,379 A (ODOM et al) 02 MAY 2000 (02.05.2000), entire document	1-15
A	US 5,945,653(WALKER et al) 31 AUGUST 1999 (31.08.1999), entire document	1-15
A	US 5,873,071 (FERSTENBERG et al) 16 FEBRUARY 1999 (16.02.1999), entire document	1-15

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

Special categories of cited documents:	
* "A" document defining the general state of the art which is not considered to be of particular relevance	* "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
* "E" earlier application or patent published on or after the international filing date	* "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
* "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	* "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
* "O" document referring to an oral disclosure, use, exhibition or other means	* "&" document member of the same patent family
* "P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

12 FEBRUARY 2001 (12.02.2001)

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